

**Just  
40  
Seconds!**



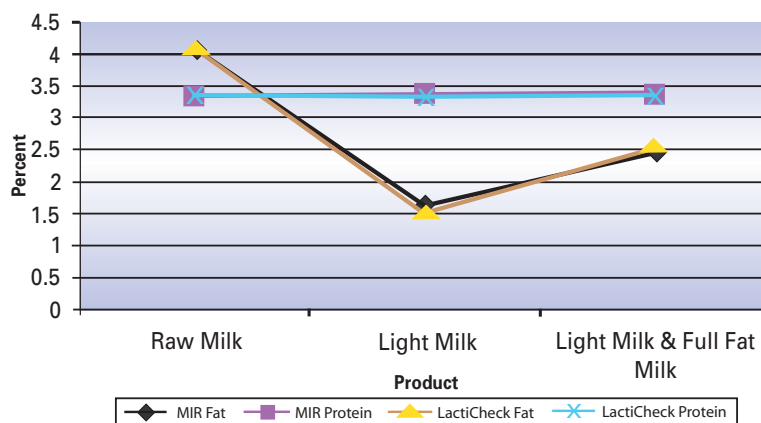
## **LACTICHECK™ RapiRead**

*An exciting ultrasonic spectroscopic method  
for rapid, reliable milk composition results.*

# Cost-effective composition testing



## LactiCheck™ Correlation Study: Mid-Infrared (MIR)



## Automated, affordable testing of milk composition!

An ultra-user-friendly, affordable and automated system, the LactiCheck™ provides fat, solids not fat, protein, added water and lactose results simultaneously in just 40 seconds! A compact, closed unit featuring simple, push-button operation, the Model LC-RR is designed for testing both unprocessed and processed cow (goat or sheep) milk products.

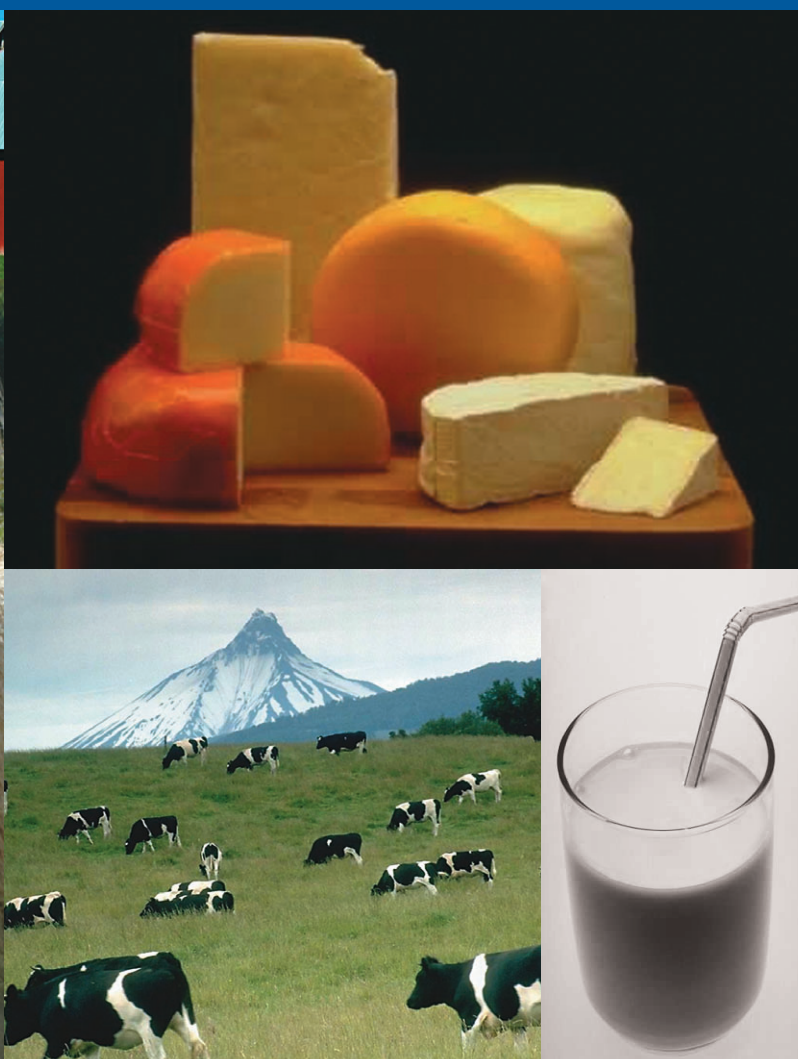
## Improved accuracy and convenient calibration!

Based upon the latest advances in ultrasound spectroscopy, the LC-RR provides an alternative to tedious, time-consuming, bench-chemistry methods for composition testing. Ease-of-use and reliability make it a good back-up for other automated systems as well! Featuring greater accuracy in fat determination, the dual channels are factory calibrated for full fat and reduced fat milk. New LACTICAL™ milk-based controls and simple, push-button procedures facilitate validation and calibration as required.





# Anywhere! Cow-side to customer



## Affordable Approach to Real-Time Results

A practical alternative to previous options for milk composition testing, the straightforward simplicity, affordability and reliability of the LactiCheck bring the benefits of technology to you today!

**Artisanal Cheesemakers:** Many cheesemakers had to rely exclusively upon costly tests and experienced delays in results by sending samples to independent laboratories. Now real-time results are achievable on-site.

**Dairy Processors:** The move from bench chemistry to automation has been outside of the budget of many small and mid-sized dairy processors. Costs of equipment, maintenance and training have been high – but today there is an affordable alternative.

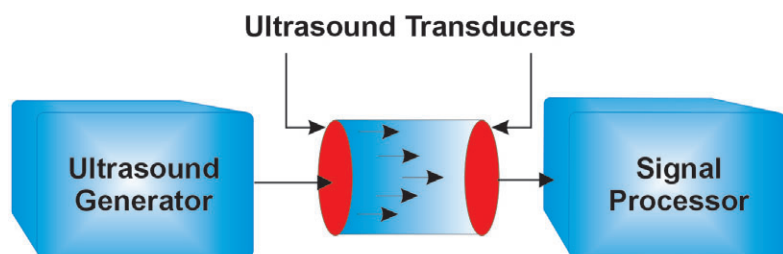
**Large Dairy Processors:** The LactiCheck is a cost-effective back-up to fully automated infrared systems and can easily be integrated into satellite positions (milk receiving, production, etc.).

## A Purchase Decision that Pays Off!

Rapid, objective results and automated recording, reporting options save time, improving productivity.

- ◆ Minimize the “sneaker network” by screening incoming milk at the receiving station. Gain more in-depth profiles on producers while freeing up valuable lab resources.
- ◆ Make the break from bench-chemistry testing to automation and realize true transparency plus improved process control!
- ◆ Save valuable time during product change-overs by giving Production at-line results. Reduce back-ups caused by heavy throughput and routine maintenance requirements of other instruments or personnel issues in the lab!

### Principle of Measurement



### Ultrasound Spectroscopy:

Ultrasonics is a measurement modality that has been recognized and highly utilized for more than 50 years in a variety of fields and applications from medical diagnostics and therapeutics to process control analysis.

Ultrasonic (or acoustic) spectroscopy presents a practical alternative to optic (or infrared) spectroscopy for material analysis. This technique brings many distinct benefits to dairy and food analysis, including the ability to readily propagate thru opaque samples.

- ◆ High frequency acoustical or sound waves probe intermolecular forces within the sample.
- ◆ By monitoring feedback relative to the attenuation and velocity of the sound waves, levels of molecular organization are characterized.
- ◆ Compositional structure of fat and solids not fat are directly measured; other parameters are algorithmically determined using this data.
- ◆ Results for milk composition are presented simultaneously on the readout and thru a standard RS-232 output, or RS-232/USB, for transfer to PC or Printer.

### Measuring Parameters: (cow, goat or sheep milk)

#### Fat

Calibrated to fixed range  
(within +/- 1.0% fat) ..... 0.3 - 9% ( $\pm 0.06$  %)  
High Fat: ..... 9 - 14% ( $\pm 0.08$  %)

#### Protein

Calibrated to fixed range  
(within +/- 1.0% protein) ..... 2 - 5% ( $\pm 0.1$  %)  
Standard ..... 2 - 5% ( $\pm 0.2$  %)

**Solids Not Fat (SNF)** ..... 6 - 12% ( $\pm 0.1$  %)

**Density** ..... 1.0260 - 1.0330 g/cm<sup>3</sup> ( $\pm 0.0005$  g/cm<sup>3</sup>)

**Added Water in Milk** ..... 2 - 60% ( $\pm 2$  %)

**Lactose** ..... 3 - 7% ( $\pm 0.1$  %)

### Electric Parameters:

AC Power Supply Voltage ..... 110/220V  $\pm 10$  - 15%  
DC Power Supply Voltage ..... 12 - 14.2 Volt Battery  
Power Consumption ..... 30 W max  
Data Transfer ..... RS-232 (USB optional)

### Environmental:

Ambient Air Temperature ..... 10 to  $+35^{\circ}$  C  
Milk Temperature ..... 15 to  $+30^{\circ}$  C  
Humidity ..... 30 - 80% Relative Humidity

### Technical Data:

Measuring Cycle ..... ~ 40 seconds  
Dimensions (W x H x D) ..... 95 x 230 X 250 mm / 3.75 x 9.0 x 9.8"  
Shipping Dimensions ..... 120 x 310 x 310 mm / 17 x 17 x 14"  
Net Weight ..... 7.3 lbs / 3.3 kg  
Gross Weight ..... 13.5 lbs / 6.0 kg  
Sample Volume ..... 20.0 ml  
Start-Up Time ..... <5 minutes

### The LactiCheck™ ships complete with:

Sample Cups  
Cleaning Solvent Concentrate  
Cleaning Sheet (Laminated) and Manual Pump  
LactiCAL™ Control(s)  
Power Cord  
User's Manual

### Options:

*(Not delivered with the standard Unit)*

LactiLog™, Data Collection Package  
CheeseCrafter™ Predictive Yield Program  
DC Power Connector  
LactiTote™, Sturdy Canvas Carrying Bag  
LactiPrinter™, Thermal RS-232 Portable Printer  
USB Interface for use with LactiLog™ (see above)  
CompuLog™ portable data logger  
LactiPrep™ Automated Sample Rocker



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